

REMARKS

Reconsideration and allowance of the above-identified application are respectfully requested. Claims 1-19, 21-39 and 42-55 are currently pending. Claims 1-5, 8-15, 17-19, 21-27, 30-39 and 42-47 have been amended. Claims 20 and 40-41 have been cancelled. Claims 48-55 are new.

Applicant notes with appreciation that the Examiner has considered and made of record some of the documents submitted with the Information Disclosure Statement (IDS) filed on May 9, 2005. However, the undersigned notes that the two documents listed under Foreign Patent Documents on the IDS were not initialed. It is respectfully requested that the Examiner review these documents and initial appropriately. Additionally, regarding documents, the reference Wilkerson et al. (U.S. Patent Number 6,094,715), while used in the Official Action, is not listed on the PTO-892 form, accordingly it is respectfully requested that this reference be added to the PTO-892 form.

Regarding the objection to the drawings, a replacement sheet is included with this amendment which adds the legend "Prior Art" to Figure 1.

Regarding the objections to claims 21 and 41 due to the claims being identical, claim 41 has been cancelled.

Claim 47 stands rejected under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter. More specifically, the Official Action states that "[a] data carrier containing program means corresponds to a signal carrier transmitting program means which is non-statutory". Claim 47 has been amended to include, among other features, "[a] computer-readable medium containing instructions which,

when executed on a computer, processor or processor element, perform sorting" which is statutory subject matter. Accordingly, reconsideration and withdrawal of the rejection of claim 47 under 35 U.S.C. § 101 are respectfully requested.

Claims 7 and 29 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. More specifically, the Official Action states that the "claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is mostly nearly connected, to make and/or use the invention". However, this rejection is respectfully traversed and the subject matter in claims 7 and 29 enable one skilled in the art to which it pertains to make and/or use the invention without undue experimentation, which is all that is required under the statute. More specifically, "virtual queues" were known to those skilled in the art at the time of the invention as can be seen by, for example, U.S. Patent Number 5,923,849 (submitted herewith) which describes the "queuing of packets in the virtual queues" (col. 8, lines 33-34). Accordingly, reconsideration and withdrawal of the rejection of claim 7 and 29 under 35 U.S.C. § 112, first paragraph, are respectfully requested.

Claims 17-21 and 37-40 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinable for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Regarding claims 17 and 37 the Official Action states that there is "insufficient antecedent basis for this limitation in the claim". Regarding claim 17, claims 1, 11 and 17 have been amended such that the antecedent basis for "each processor or to

each processor element" and "said packet records" is now correct. Regarding claim 37, claims 22 and 37 have been amended such that the antecedent basis for "said packet records" is now correct.

Regarding claims 18, 19, 38 and 39 the scope of protection being sought by the Applicant is allegedly indefinite. More specifically, the Official Action states that "[i]t is unclear what is meant by applicant by the tables being the same or different". Claims 18 and 38 have been amended to include, among other features, "wherein said tables are for the same class of service" and claims 19 and 39 have been amended to include, among other features, "wherein said tables are for varying classes of service".

Regarding claims 20 and 40, the Official Action is silent with respect to how claims 20 and 40 do not meet the requirements of 35 U.S.C. § 112, second paragraph. However, claims 20 and 40 have been cancelled.

Regarding claim 21, the phrase "such as" allegedly renders the claim indefinite because it is allegedly unclear whether the limitations following the phrase are part of the claimed invention". Claim 21 has been amended by replacing "such as" with "including".

Accordingly, based upon the above described claim amendments, reconsideration and withdrawal of claims 17-19, 21 and 37-39 under 35 U.S.C. § 112, second paragraph, are respectfully requested.

Claims 1-10, 17, 21-31, 42-45 and 47 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Donis et al. (U.S. Patent Application US 2002/0075882 A1). Prior to discussing this ground of rejection in detail, a brief

description of exemplary embodiments is provided below.

According to exemplary embodiments, methods and systems for sorting incoming data packets in real time, include sorting the packets into an exit order before storing them in memory. The sorting may be responsive to information contained within a packet and/or within a table and/or information associated with a data packet stream in which the packet is located, to determine an exit order number for that packet. The packets may be inserted into one or more queues by a queue adapted to insert packets into the queue means in exit order.

By way of contrast, Donis et al. (hereafter "Donis") describes buffering in a communications network where the communications are stored, e.g., buffered, based on corresponding quality of service (QoS) levels. The differences between Donis and Applicant's claims will be described below with respect to Applicant's claims.

Amended Claim 1

"A system ~~comprising means~~ for sorting incoming data packets in real time, ~~the system comprising:~~ [;]
assignment means, operable only on packet records containing information about said packets,
for assigning an exit order to said packets in real time; [and]
queue means responsive to said assignment means for storing and arranging ~~queueing~~ said packet
records ~~sorted packets~~ for output in said exit order, and
memory means for storing said packets or data portions thereof [;], wherein said packets or data
portions being output from the memory means in accordance with the corresponding packet records being
output from the queue means."

Regarding Applicant's claim 1, the Official Action references Figure 4 and paragraphs [0036] and [0037] of Donis to support the §102 rejection. Additionally, the Official Action takes the position that these cited sections and Figure of Donis

describe sorting incoming data packets in real time and assigning an exit order to the packets in real time. However, it is respectfully submitted that these sections and Figure of Donis lack these elements. More specifically, paragraphs [0036], [0037] and Figure 4 of Donis show that incoming traffic is sorted and stored on the basis of its Quality of Service (QoS) level. This is different from Applicant's amended claim 1 which describes, among other features, an "assignment means, operable only on packet records containing information about said packets, for assigning an exit order to said packets in real time" (emphasis added). These cited sections of Donis do not describe "assigning an exit order" which can be found, among other things, only in Applicant's claim 1 combination. For example, it can be seen in paragraphs [0043] of Donis, that Donis recognizes the concept of "an exit order" and chooses not to address it as shown by "additional steps may be taken when order of cell transmission is important". Moreover, Donis does not disclose, suggest or imply that the packet sorting operation is operable "only on packet records" as claimed in Applicant's claim 1 combination. Also, the cited sections of Donis are silent with regard to performing these operations in "real time". Similar comments apply to independent claims 21, 42-45 and 47.

Dependent claims 2-10, 17 and 22-31 are allowable at least for the reasons described above with respect to the independent claims from which they ultimately depend.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-10, 17, 21-31, 42-45 and 47 under 35 U.S.C. § 102(e) by Donis et al. are respectfully requested.

Claims 11-16, 20, 32-37, 40 and 46 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Donis et al. in view of Wilkinson et al. (U.S. Patent Number 6,094,715). These claims are allowable at least for the reasons described above with respect to the independent claims from which they depend.

Accordingly, reconsideration and withdrawal of the rejection of claims 11-16, 20, 32-37, 40 and 46 under 35 U.S.C. § 103(a) over Donis et al. in view of Wilkinson et al. are respectfully requested.

New claims 48-55 have been added to provide additional claim coverage. More specifically, claim 48 describes for the system as claimed in claim 13, further comprising tables of information for sorting said packets or said packet records, wherein said tables are stored locally to each processor element of said parallel processor. Claim 51 describes for the system as claimed in claim 48, wherein said processor elements share information from their respective tables, such that: (a) the information held in the table in one processor element is accessible by other processing element(s) of said parallel processor; and (b) processor elements have access to other processor elements in said parallel processor, whereby processor elements can perform table lookups on behalf of other processor elements of said parallel processor. It is respectfully submitted that these new claims are patentably distinguishable from the documents of record.

All of the objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that this application is in condition for allowance and a notice to that effect is earnestly solicited. Should the Examiner have any questions regarding this response or the application in general, she or he

is invited to contact the undersigned at (540) 361-1863 to expedite prosecution of this application.

Respectfully submitted,

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Date: December 11, 2008

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